



# 11

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/957,004	
	Filing Date	September 19, 2001	
	First Named Inventor	Kollin Tierling	
	Art Unit	2635	
	Examiner Name	Nguyen, Nam V.	
Total Number of Pages in This Submission	7	Attorney Docket Number	IMM135

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ENCLOSURES (check all that apply)				
<input checked="" type="checkbox"/> Fee Transmittal Form  <input checked="" type="checkbox"/> Fee Attached  <input type="checkbox"/> Amendment / Reply  <input type="checkbox"/> After Final  <input type="checkbox"/> Affidavits/declaration(s)  <input type="checkbox"/> Extension of Time Request  <input type="checkbox"/> Express Abandonment Request  <input checked="" type="checkbox"/> Supplemental Information Disclosure Statement in duplicate  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Response to Missing Parts/ Incomplete Application  <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s)  <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition  <input type="checkbox"/> Petition to Convert to a Provisional Application  <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund  <input checked="" type="checkbox"/> CD, Number of CD(s) <u>1</u>	<input type="checkbox"/> After Allowance Communication to Group  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences  <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter  <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):  <b>Check #364578 in the amount of \$180 PTO/SB/08a Return Postcard</b>		
<table border="1"><tr><td>Remarks</td><td></td></tr></table>			Remarks	
Remarks				

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	John Alemanni, Esq., Kilpatrick Stockton LLP Reg. No. 47,384
Signature	
Date	June 21, 2004

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Typed or printed name	Kay Farmer		
Signature		Date	June 21, 2004

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# FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ ) 180.00

Complete if Known

Application Number 09/957,004  
Filing Date September 19, 2001  
First Named Inventor Kollin Tierling  
Examiner Name Nguyen, Nam V.  
Art Unit 2635  
Attorney Docket No. IMM135

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## METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit card ☐ Money ☐ Other ☐ None  
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## FEE CALCULATION

### 1. BASIC FILING FEE

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1001	750	2001	375	Utility filing fee	
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1)

(\$ ) 0

### 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims		Extra Claims		Fee from below		Fee Paid	
Independent Claims		0		X		0	
Multiple Dependent		0		X		0	

Large Entity		Small Entity		Fee Description
Fee Code	Fee (\$)	Fee Code	Fee (\$)	
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2)

(\$ ) 0

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

### 3. ADDITIONAL FEES

Large Entity		Small Entity		Fee Description	Fee Paid
Fee Code	Fee (\$)	Fee Code	Fee (\$)		
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1,300	2453	650	Petition to revive - unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	180.00
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

(\$ ) 180.00

## SUBMITTED BY

Name (Print/Type)	John C. Alsmanni	Registration No. (Attorney/Agent)	47,384	Telephone	(336) 607-7300
Signature				Date	June 21, 2004

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Kollin Tierling  
Ser. No. : 09/957,004  
Fil. Date : September 19, 2001  
For : Circuit and Method for a Switch Matrix and Switch Sensing  
Examiner : Nguyen, Nam V.  
Art Unit : 2635

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Mail Stop: Amendment  
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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

S I R:

Applicant has submitted additional references listed on the enclosed Supplemental Information Disclosure Statement. Pursuant to 37 C.F.R. §§1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the reference listed on the attached Form-PTO SB/08a. Applicant has submitted references listed on the enclosed Supplemental Information Disclosure Statement in electronic form on the enclosed compact disc. If the Examiner desires hard copies of some or all of these references, Applicant will provide these expeditiously upon Examiner's request.

This Supplemental Information Disclosure Statement is being submitted after the mailing of a first Office Action in this application. Accordingly, enclosed please find a check in the amount of \$180 for the fees required by this action. The Commissioner is also hereby authorized to charge any additional fees under 37 C.F.R. 1.16 or 1.17 which may be required during the entire pendency of this application, or to credit any overpayment, to Deposit Account No. 16-1435. A duplicate of this sheet is attached for that purpose.

It is respectfully requested that the reference listed on the attached form be expressly considered by the Examiner and be made of record in the application and appear among the "References Cited" on any patent to issue therefrom.

06/24/2004 MBLANCO 00000005 09957004

01 FC:1806

180.00 DP

Date: June 21, 2004

Respectfully submitted,

By

John Alemanni

Reg. No. 47,384

KILPATRICK STOCKTON LLP  
1001 West Fourth Street  
Winston-Salem, North Carolina 27101  
(336) 607-7311



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# **SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 3

## **Complete if Known**

Application Number	09/957,004
Filing Date	September 19, 2001
First Named Inventor	Kollin Tierling
Art Unit	2635
Examiner Name	Nguyen, Nam V.
Attorney Docket Number	IMM135

## **U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	1	2,972,140	2/14/1961	Hirsch	
	2	4,127,752	11/28/1978	Lowthorp	
	3	4,262,549	4/21/1981	Schwellenbach	
	4	4,333,070	6/1/1982	Barnes	
	5	4,464,117	8/7/1984	Forest	
	6	4,484,191	11/20/1984	Vavra	
	7	4,885,565	12/5/1989	Embach	
	8	5,022,384	6/11/1991	Freels	
	9	5,165,897	11/24/1992	Johnson	
	10	5,175,459	12/29/1992	Danial et al.	
	11	5,186,695	2/16/1993	Mangseth et al.	
	12	5,283,970	2/8/1994	Aigner	
	13	5,436,622	7/25/1995	Gutman et al.	
	14	5,437,607	8/1/1995	Taylor	
	15	5,575,761	11/19/1996	Hajianpour	
	16	5,690,582	11/25/1997	Ulrich et al.	
	17	6,111,577	8/29/2000	Zilles et al.	
	18	6,160,489	12/12/2000	Perry et al.	
	19	6,422,941	7/23/2002	Thorner et al.	

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## **FOREIGN PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	20	WO 03/026130 A1	3/27/2003	Immersion Corporation		
	21	JP H2-185278	7/19/1990	Taito Corporation		
	22	JP H4-8381	1/13/1992	Epoch Co. and Key-Planning Co.		
	23	JP H7-24147	1/27/1995	Sega Corporation		
	24	JP H5-192449	8/3/1993	Taito Corporation		

Examiner Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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**SUPPLEMENTAL  
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STATEMENT BY APPLICANT**

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Sheet 2 of 3

**Complete if Known**

Application Number	09/957,004
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Examiner Name	Nguyen, Nam V.
Attorney Docket Number	IMM135

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**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	25	AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.	
	26	BLISS, "Optical-to-Tactile Image Conversion for the Blind," IEEE Transactions on Man-Machine Systems, Vol. MMS-11, No. 1, March 1970.	
	27	CADLER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," Bachelor of Science Thesis, MIT, June 23, 1983.	
	28	"Cyberman Technical Specification," Logitech Cyberman SWIFT Supplement, 4/5/1994.	
	29	EBERHARDT et al., "Including Dynamic Haptic Perception by The Hand: System Description and Some Results," DSC-Vol. 55-1, Dynamic Systems and Control: Volume 1, ASME 1994.	
	30	GOBEL et al., "Tactile Feedback Applied to Computer Mice," International Journal of Human-Computer Interaction, Vol. 7, No. 1, pp. 1-24, 1995.	
	31	JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," Armstrong Aerospace Medical Research Laboratory, AAMRL-TR-90-039, August, 1990.	
	32	KACZMAREK et al., "Tactile Displays," Virtual Environment Technologies.	
	33	KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," PRESENCE, 4(4):387-402, 1995.	
	34	LAKE, "Cyberman from Logitech," GameBytes, 1994.	
	35	NOLL, "Man-Machine Tactile," SID Journal, July/August 1972 Issue.	
	36	OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95, Seoul, Korea, 21-24 August 1995.	

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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(Use as many sheets as necessary)

Sheet 3 of 3

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NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	37	PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," Master of Science Thesis, MIT, Nov. 8, 1990.	
	38	PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 <sup>nd</sup> Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.	
	39	ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," Ph.D. Dissertation, Stanford University, June 1994.	
	40	Safe Flight Instruments Corporation, "Coaxial Control Shaker," Part No. C-25502, 1 July 1967.	
	41	WIKER, "Teletouch Display Development: Phase 1 Report," Technical Report 1230, Naval Ocean Systems Center, San Diego, April 17, 1989.	
	42	YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems, Raleigh, NC, July 7-10, 1992	

Examiner Signature		Date Considered	
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